List of Acronyms

AC Alternating current **ACE** Area control error

ACSR Aluminum conductors steel reinforced

AEP American Electric Power **AGC** Automatic generation control **ASD** Adjustable speed drive **ATC** Available transfer capability **BPA** Bonneville Power Administration

CAISO California Independent System Operator **CDEC** Centro de Despacho Económico de Carga

COE Corps of Engineers

CPS Control performance standard

CREPC Committee on Regional Electric Power Cooperation

CSC Commercially significant constraint **CSC** Convertible static compensator

DC Direct current

DCS Disturbance control standard DG Distributed generation DOE U.S. Department of Energy **DSA** Dynamic security assessment **ECA Electric Consumers Alliance EEI** Edison Electric Institute

EIA U.S. Energy Information Administration

EMF Electromagnetic field

EMS Energy management system

ERCOT Electric Reliability Council of Texas **ERO** Electric reliability organization **FACTS** Flexible AC transmission system

FCTTC First contingency total transfer capability **FERC** Federal Energy Regulatory Commission

FGR Flowgate right

FTR Financial transmission right **GIL** Gas-insulated transmission lines **GPS** Global positioning system

GTO Gate turn-off **HTSC** High-temperature super-conducting

HVDC High-voltage direct current **IES** Intelligent energy system **IPO** Initial public offering

IPP Independent power producer ISO Independent system operator

ISO-NE ISO New England

ITC Independent transmission company

kV Kilovolt

LADWP Los Angeles Department of Water and Power

LMP Locational marginal price

MAPP Mid-Continent Area Power Pool **MISO** Midwest Independent System Operator

MRD Market redispatch MWh Megawatt hour

NAERO North American Electric Reliability Organization

NARUC National Association of Regulatory Utility Commissioners

NEPA National Environmental Policy Act

NEPOOL New England Power Pool

NERC North American Electric Reliability Council

NETA New Electricity Trading Agreement NGA National Governors Association NGC National Grid Company

NPC National Petroleum Council NTG National transmission grid

NTGS National Transmission Grid Study **NYPA** New York Power Authority O&M Operation and maintenance

OASIS Open Access Same-Time Information System

OPF Optimal power flow

OTC Operating transfer capability **PBR** Performance-based regulation

PCCIP Presidential Commission on Critical Infrastructure Protection

PCR Price-cap regulation **PDC** Phasor data concentrators PG&E Pacific Gas and Electric

PJM Pennsylvania-New Jersey-Maryland Interconnection

PMA Power marketing administration

PMU Phasor measurement unit PPL Polypropylene paper laminate PPSM Portable power system monitor **PSAM** Power system analysis monitor **PSC** Public service commission

PTDF Power transfer distribution factor **PUC** Public utilities commission R&D Research and development **RMS** Reliability Management System

ROR Rate of return

RTO Regional transmission organization SCADA Supervisory control and data acquisition **SMES** Superconducting magnetic energy storage

SVC Static-var compensator

TANC Transmission Agency of Northern California

TCSC Thyristor-controlled series capacitor

TLR Transmission loading relief

TO Transmission owner

TSO Transmission system operator TSP Transmission service provider TVA Tennessee Valley Authority **UPFC** Unified power-flow controller WAMS Wide-area measurement system WAPA Western Area Power Administration WGA Western Governors' Association

WSCC Western Systems Coordinating Council

XLPE Extruded dielectric polyethylene